CLAIMS

1. A method of forming a deformed reinforcing bar splice comprising the steps of cutting a bar to length, cold working the bar end by radially cold forming the bar end at a section of the bar end, then forming a thread on the compressed bar end, with the threads being axially within the cold formed section, then threading an internally threaded sleeve onto two such formed and threaded bar ends to form a deformed reinforcing bar splice.

2. A method as set forth in claim 1 wherein said threads are tapered and said sleeve has matching internal threads.

3. A method as set forth in claim 2 wherein said cold forming step forms a taper section on said formed section to facilitate threading.

4. A method as set forth in claim 2 wherein said formed section extends beyond the tapered threads along the length of the bar.

5. A method as set forth in claim 4 wherein said formed section extends beyond the threads for at least about half the length of the threads.

6. A method as set forth in claim 3 wherein said cold forming step forms a cylindrical section next to and at the larger end of said taper section; and then forming threads on said taper section.

7. A method as set forth in claim 1 wherein said forming step comprises radial compression of the bar flattening any deformations thereon.

8. A method as set forth in claim 7 wherein said bar is radially compressed at least twice with the bar axially rotated between compressions.

9. A method as set forth in claim 8 wherein the bar is radially compressed between dies substantially half round and having a radius approximately that of the nominal diameter of the bar.

10. A process for forming a deformed bar end used in concrete construction comprising the steps of cutting the bar end, then radially cold forming the bar end by pressing the bar end to remove the deformations at the bar end and to cold work the bar end while circularizing the bar end, and threading the radially pressed section of the bar end to receive a threaded sleeve coupler, the length of radial cold forming being substantially longer than the threads so that the mouth of the coupler will be positioned on a pressed area of the bar extending beyond the mouth of the coupler.

11. A process as set forth in claim 10 wherein the pressed area of the bar end extending beyond the mouth of the coupler is from about $^{1}/_{3}$ to about $^{2}/_{3}$ the axial length of the threads.

12. A process as set forth in claim 11 wherein the pressed area of the bar not threaded is from about $^{1}/_{3}$ to about $^{2}/_{3}$ the total pressed area of the bar.

13. A process as set forth in claim 10 wherein said threads are tapered.

14. A process as set forth in claim 10 wherein said threads are parallel.

15. A process as set forth in claim 10 wherein said cold forming the bar end also straightens the bar end.

16. A process as set forth in claim 10 wherein said cold forming the bar end forms a tapered and adjacent cylindrical cold worked section of the bar end.

17. A process as set forth in claim 16 wherein the adjacent cylindrical section extends from the large end of the taper for about $^{1}/_{3}$ to about $^{2}/_{3}$ or more the length of the taper.

18. An improved performance deformed reinforcing bar splice comprising an internally threaded sleeve with mouth ends, and bar ends having bar threads matching the sleeve threads, said sleeve being tightened on said bar ends, and said bars having a cold formed area on each end extending axially longer along the bar ends than the bar threads.

19. A splice as set forth in claim 18 wherein said bar threads extend from about $^{2}/_{3}$ to about ½ the length of the cold formed area.

20. A splice as set forth in claim 18 wherein said threads are tapered and said cold formed area extends well beyond the mouth of the sleeve.

21. A splice as set forth in claim 18 wherein said threads are parallel and said cold formed area extends well beyond the mouth of the sleeve.

22. A splice as set forth in claim 18 wherein the cold formed area of the bar ends is substantially cylindrical with any deformations on the bar in such area being flattened.

23. A splice as set forth in claim 18 wherein said threads are tapered and cut.

24. A splice as set forth in claim 18 wherein said bar threads are rolled.

25. A splice as set forth in claim 18 wherein said sleeve is formed from hex or round stock.